ACTUATORS AND CONTROLS

Stonel Quartz Limit Switch

The Quartz is available in explosion proof (QX), nonincendive and intrinsically safe (QN) and general purpose (QG) versions. The robust epoxy coated anodized aluminum construction makes this platform extremely durable and well suited for use in corrosive, heavy wash down environments. A broad range of switching, position transmitter and communication options may be selected to accommodate most applications.

This versatile platform adapts to a wide variety of valve systems. Attach the Quartz to quarter-turn actuators, manual operators, linear operators and positioners using readily available stainless steel mounting systems.

1. **Enclosures Optimized for Environment**
    QX: Explosion proof, water tight and corrosion-proof enclosure is approved for use in div. 1/zone 1 hazardours areas.

    QN: Nonincendive is approved for all div.2/zone 2 hazardous environments with proximity sensors using a clear cover. Intrinsically safe Namur sensors or passive switches are available for div. 1/zone 0 applications.

    QG: General purpose features a clear Lexan cover with mechanical switches. All enclosures are rated NEMA 4, 4x, and 6.

2. **Rapid Enclosure Access**
    Screw-on cover allows quick enclosure access, saving you valuable maintenance and set-up time. The cover provides a vapor tight seal and allows entry to internal components in less than five seconds.

3. **Faster Wiring**
    Pre-wired and labeled terminal strip enables quick, convient attachment of field wires.

4. **Wide Variety of Switching & Communication**
    Switching options include dual module sensors and communication, Maxx-Guard proximity switches and mechanical switches. Continuous signal output is available in a 4 to 20 mA position transmitter.

5. **Quick Set Cams are Easy to Adjust**
    Touch and Tune switch settings allow you to make adjustments in seconds without the use of tools.

6. **Dual Shaft O-ring Seals Eliminate Corrosion**
    Top inner and bottom outer shaft o-rings seal the drive bushing from both external corrosives and internal contaminants that enter the enclosure.

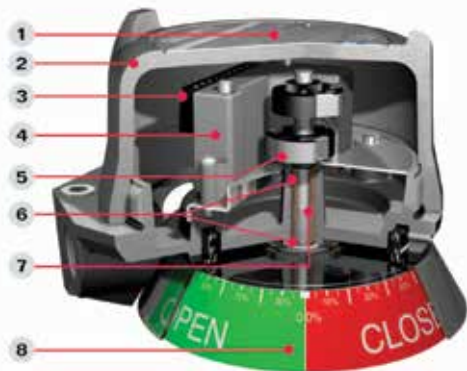7. **Special Drive Bushing Assures Long Cycle Life**
    The oil impregnated bronze bushing maintains smooth operation and eliminates the potential for shaft seizure due to actuator shaft eccentricity.

8. **Space Saving Visual Indication**
    Visual indicator offers excellent view ability without sacrificing accessibility or adding to space requirements. Indicators are also available with continuous percentage or three-way indication.

Moniteur Limit Switches

Moniteur Limit Switches have been designed to provide the most visible and reliable valve position indication in general purpose, difficult process, and explosion-proof environments. With a wide variety of switches and sensors available to match your application.

Features Include:
• The industry's only "true" visual valve position indicator available for multi-port valves, adjustable to match the actual physical flow pattern of the valve.

• Patented engineered Loc-Ring Cam and Shaft Retention System provides unsurpassed sensing accuracy over the multi-million cycle life of the physical platform.

• Clear Ektar cover offers optimum chemical resistance and strength and is environmentally sealed to prevent fogging and entry of contaminants.

• Indicator is fully adjustable to any valve or actuator.

• Internal switches and terminal block are labeled for easier installation.

• Careful material selection provides a rated life of minimum 1,000,000 cycles.

• Materials of construction selected to excel in high vibration, corrosive, and dirty environments, either indoors or outdoors.

• "Flat cover" version is available without an indicator for areas with tight space requirements.

Part Number	Model No.	Description
3T-LS3-02	FMYB-5120	NEMA 4/Indicator/2 SPDT Mech.
3T-LS3-06	FFNB-5120	NEMA 4/Flat Cover/2 SPDT Mech.
3T-LS3-01	AMYB-5120	NEMA 7/Indicator/2 SPDT Mech.
3T-LS3-05	AFNB-5120	NEMA 7/Flat Cover/2 SPDT Mech.
3T-LS3-03	AMYB-5220	NEMA 7/Indicator/2 SPDT Prox.
3T-LS3-07	AFNB-5220	NEMA 7/Flat Cover/2 SPDT Prox.
3T-LS3-04	FMYB-5220	NEMA 4/Indicator/2 SPDT Prox.

Part Number	Actuator Size
63-002-12	0012
63-002-13	0025-0350
63-002-14	0600-4000

*Short shaft NAMUR must use kits above.

ACTUATORS AND CONTROLS

Stonel Quartz Limit Switch - How to Order

Explosion proof Quartz Models (Aluminum Cover)

Series	Sensors/Switches		Enclosure		Conduit Entries		Indicator	
	Sensor Modules		E	North American (NEC/CEC)	02	(1) 3/4" NPT &	SRA	Red-Closed / Green-Open
	33	SST N.O. Switching Sensor Dual Module	R	International (IEC/ATEX)		(1) 1/2" NPT	SGA	Green-Closed / Red-Open
			F	INMETRO	03	(1) 3/4" NPT &	S1A	T1 3-way
	Valve Communication Terminals (VCTs)		S*	Stainless Steel North American (NEC/CEC)		(2) 1/2" NPT	S2A	T2 3-way
	92	DeviceNet VCT	T*	Stainless Steel International (IEC/ATEX)	05	(2) M20	S3A	T3 3-way
	93	Foundation Fieldbus	M*	Stainless Steel INMETRO			S4A	T4 3-way
	96	AS-Interface			06	(3) M20	S5A	T5 3-Way
	97	AS-Interface (w/ extended addressing)					S0A	No Indication
			*	Available w/ 03 or 06 conduit entry only			SXA	Special
	Mechanical Switches						SCA	Continuous
	2V	(2) SPDT Mechanical Switches						
	2W	(2) SPDT Gold Contact Mechanical Switches						
	4V	(4) SPDT Mechanical Switches						
	4W	(4) SPDT Gold Contact Mechanical Switches						
	14	(2) DPDT Mechanical Switches						
	5V	Position Transmitter w/ (2) SPDT Mechanical Switches						
QX	5W	Position Transmitter w/ (2) SPDT Mechanical Switches						
	Expeditors (Proximity Type)							
	82	DeviceNet						
	86	AS-Interface						

Sensors/Switches

Function		Switch/Sensor Type	
2	(2) Switches	P	SPST Maxx-Guard
4	(4) Switches	L	SPST Maxx-Guard (LED)
5	Position Transmitter w/ (2) or No Switches	G	SPDT Maxx-Guard
7	High Performance Position Transmitter w/ (2) or No Switches	H	SPDT Maxx-Guard
8	Expeditor, Y or H switches only	S	SPDT Maxx-Guard (LED)
		Y	Expeditor Only (3)
		F	PNP Solid State 3-Wire P&F
		X	SST Sensor (LED)
		O	No Switches

Nonincendive & Intrinsically Safe Quartz Models (Clear Cover)

Series	Sensors/Switches		Enclosure		Conduit Entries		Indicator	
	Sensor Modules		C	North American (NEC/CEC)	02	(1) 3/4" NPT &	SRA	Red-Closed / Green-Open
	33	SST N.O. Switching Sensor Dual Module	D	International (IEC/ATEX)		(1) 1/2" NPT	SGA	Green-Closed / Red-Open
	44	Namur Sensors Dual Module I.S.; DIN 19234			03	(1) 3/4" NPT &	S1A	T1 3-way
						(2) 1/2" NPT	S2A	T2 3-way
	Valve Communication Terminals (VCTs)				05	(2) M20	S3A	T3 3-way
	92	DeviceNet VCT					S4A	T4 3-way
	93	Foundation Fieldbus			06	(3) M20	S5A	T5 3-Way
	96	AS-Interface					S0A	No Indication
	97	AS-Interface (w/ extended addressing)					SXA	Special
							SCA	Continuous
	Expeditors (Proximity Type)							
	82	DeviceNet						
	86	AS-Interface						

(Series: QN)

Sensors/Switches

Function		Switch/Sensor Type	
2	(2) Switches	P	SPST Maxx-Guard
4	(4) Switches	L	SPST Maxx-Guard (LED)
5	Position Transmitter w/ (2) or No Switches	G	SPDT Maxx-Guard
7	High Performance Position Transmitter w/ (2) or No Switches	H	SPDT Maxx-Guard
8	Expeditor, Y or H switches only	S	SPDT Maxx-Guard (LED)
		Y	Expeditor Only (3)
		F	PNP Solid State 3-Wire P&F
		X	SST Sensor (LED)
		O	No Switches

Intrinsically Safe Type

J	SPST (Passive)
M	SPDT (Passive)
N	P + F Namur Sensors

General Purpose Quartz Models (Clear Cover)

Series	Function		Enclosure		Conduit Entries		Indicator	
	Mechanical Switches		C	General Purpose	02	(1) 3/4" NPT &	SRA	Red-Closed / Green-Open
	2V	(2) SPDT Mechanical Switches				(1) 1/2" NPT	SGA	Green-Closed / Red-Open
	2W	(2) SPDT Gold Contact Mechanical Switches			03	(1) 3/4" NPT &	S1A	T1 3-way
	4V	(4) SPDT Mechanical Switches				(2) 1/2" NPT	S2A	T2 3-way
QG	4W	(4) SPDT Gold Contact Mechanical Switches			05	(2) M20	S3A	T3 3-way
	14	(2) DPDT Mechanical Switches					S4A	T4 3-way
					06	(3) M20	S5A	T5 3-Way
							S0A	No Indication
							SXA	Special
							SCA	Continuous

See price list or contact factory for Conbraco P/N and price.

Apollo Valves
Made In The USA